

An inaugural dissertation on the disease
termed

Dysentery March 5. 1829

Cholera Infantum

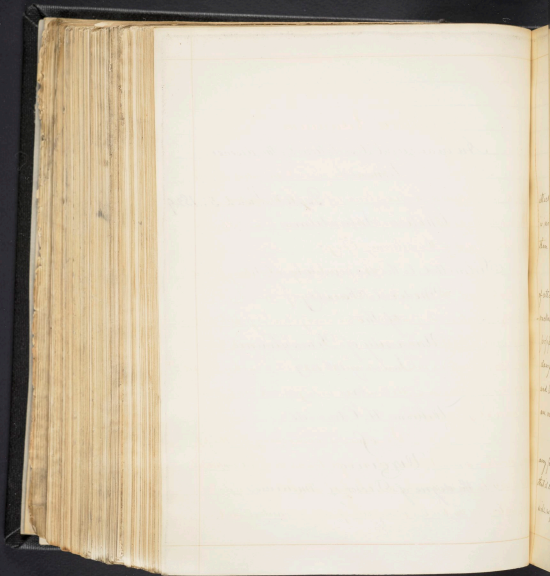
Submitted to the examination of the
Medical Faculty
of the
University of Pennsylvania
January 12th 1829

By

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of
Virginia

For the degree of Doctor of Medicine

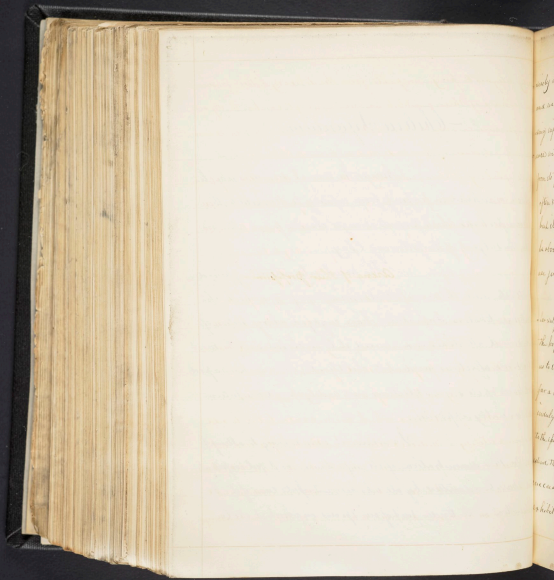


Cholera Infantum

Amid the several disorders which attack mankind in passing from infancy to decrepitude, there is none perhaps which presents stronger claims to our attention than the subject of the following Essay.

The peculiarly interesting period of attack, and the manifest alarming symptoms which characterize Cholera Infantum, have engaged a large portion of professional attention and caused it to be classed with the most dangerous affections incident to childhood; its march is rapid, and traces of its severe afflictions and widely spread destruction are annually apparent.

I conceive it unnecessary to attempt any further demonstration of its importance, as I feel confident that it will be admitted by all who have witnessed cases of it, or will reflect on the tender part of our species on which it exerts



sively delights to prey, incapable from the delicacy of their frames, and weakness of their constitutions, successfully to combat the depressing influence of any morbid action, & full and perfect argument with a disease so frequent and so formidable, and which from its fatality strikes so directly to the root of domestic happiness, often nipping in the bud the expanded hopes, and the bright but illusive anticipations of fond and devoted parents, must be obvious to every practitioner, more especially to those who are just entering upon the *Arena of their profession* - ✓

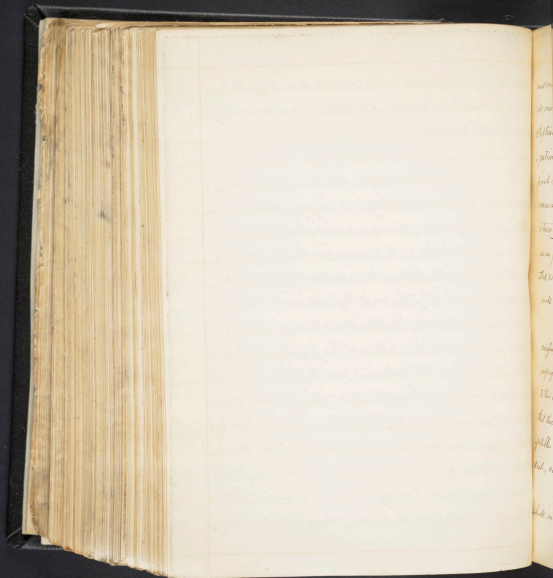
In making this mortality the particular subject of my considerations, I have not been flattered with the hope of being able to advance anything new or original, either as to its pathology or proper method of cure, nor am I so far a lover of novelty as to grasp at any new hypothesis, or indulge in idle speculations, which are not calculated to add to the essential utility of Medical Science, to soothe the afflictions, or to extend the comforts of my fellow creatures; but I foster the belief that if I have succeeded in my effort to give a detail of the experience of others, and to exhibit in a form as concise as possible, the testimony of those whose writings

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afford interesting information on this important malady, I leave
 not labour'd in vain on the cost of Utility, whilst endeavouring
 to comply with the requisitions of our University.

Cholera Infantum or as it is commonly designat-
 ed amongst us the vomiting and purging of children, which
 from the regularity of its appearance in the summer months is like-
 wise known by the name of the Summer complaint of children,
 is a modification of the Cholera and somewhat peculiar to adults-
 the distinction implied by the word *Infantum* is of modern date;
 it is not used by Boerhaave, Cullen, Sydenham nor Eberleson,
 The two last authors mention children being affected by Cholera
 Morbus, Boerhaave in his Aphorisms, nor Cullen in his first
 lines, do not mention children at all in their account of Cholera,
 from this it is evident that they intended to include the Vomiting
 and Purging of children under the general title of Cholera Morbus.
 This disease makes its appearance sooner or later, according to the
 season and section of the Country in which it is found, With us
 it seldom shows itself before the middle of June or the first of July.



and continues throughout the summer months occasionally, and ceasing its ravages before the cooler days of Autumn or the frosty months of September, and October, its frequency and danger being usually proportionate to the heat of the weather. It affects children from the first or second week after birth, until their second year, but most commonly seizes upon them from the age of five, to that of eighteen or twenty months, occurring rarely in country places, (except such as are favourable to the production of Autumnal fevers) or thinly settled villages. It seems almost to be exclusively appropriated to towns and Cities.

The children of the poorer classes of society, who live in confined and ill-ventilated houses exposed to the destructive effects of improper diet, and clothing, suffer most. It is, however, by no means confined to this class of persons, for so general and powerful is its influence, that those children who enjoy the advantages of large cool houses, of comfortable clothing, of cleanliness and of a wholesome and well regulated diet, can only be said to be less exposed.

Considering the causes of this disease I shall merely divide them into the remote or predisposing, and exciting or

to the

occasional. The predisposing cause seems to be a peculiar condition of the atmosphere, and the most usual exciting causes are impurities in diet and clothing, aggravated by tettering worms, early weaning &c. The division here made, will not always be found practically correct, a remote cause may, and sometimes does, act as an exciting cause; and vice versa, thus being only exceptions which do not invalidate the general rule.

As a just knowledge of the causes mentioned, which operate in the production of this disease is of much importance, not only in the treatment, but likewise, requisite in forming a correct prophylaxis, I cannot, in a more lengthy consideration of them, well not be deemed inappropriate, and while thus identifying myself in this interesting part of our subject, I shall not overlook that important indication, *Brevity*.

I have mentioned that Cholera Infantum seems to be almost exclusively confined to Town and Cities, — here it is probably produced by the noxious exhalations liberated by the warmth of the season, acting upon accumulations of filth, and dirt, and upon masses of vegetable matters in a state of decay, which are always to

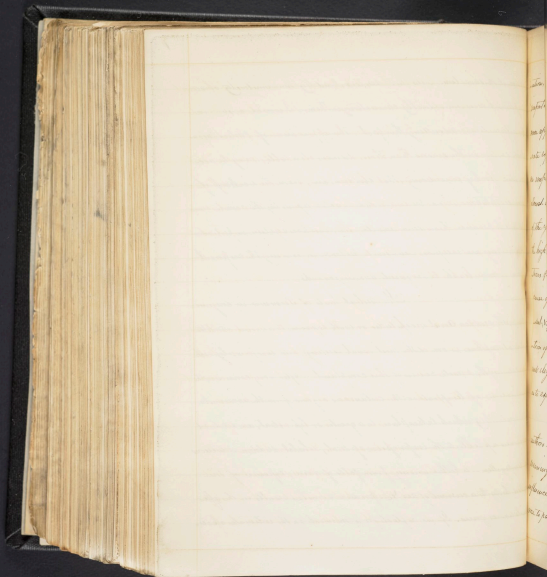


be found in those places. What the characteristic principles of these
 subtle materials are, which emanate from reservoirs of filth, clouds
 our recesses, but combined with heat and moisture, they are
 capable of forming an infectious state of the atmosphere, which
 predisposes the system to disease; and children who are most suscep-
 tible, are generally the first victims to its malarious influence. as
 a remote cause capable of exciting a predisposition to an attack,
 the debility both general and local produced by a vitiated state
 of the atmosphere, has been mentioned. But beside the state of the
 air produced by the operations of the causes mentioned, I apprehend there
 may be a peculiar distemperature, in it produced either by an abstraction
 of some of its common principles or the addition of new ones, or per-
 haps by some other change in its chemical qualities or electrical condition
 which rendering it an unnatural stimulus, generates in it a capacity
 of exciting in the system a predisposition to derangement. But might
 it not be asked, why at this time, is a predisposition to disease excited
 in the child only?—By way of elucidating the foregoing interrogatory
 I would propose another. Is not Cholera Infantum merely a modifi-
 cation of the Cholera and remittent fever of adults?—From its appear-



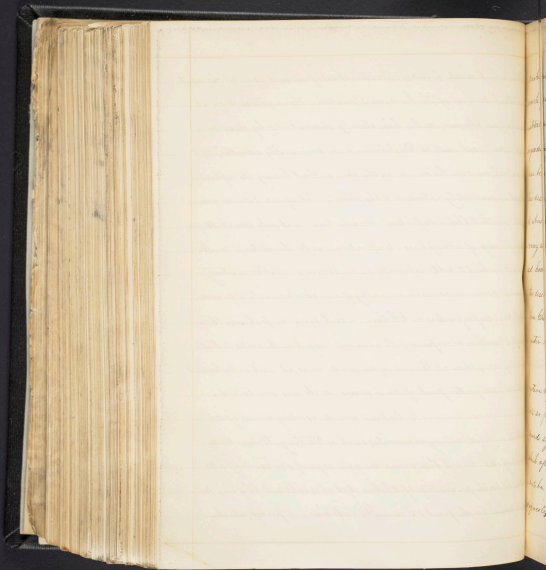
... arise at the same time with these diseases, and by the similarity of symptoms which individually characterize them, I would assure in the affirmatives; admitting this fact, the appearance of Cholera Infantum earlier in the season than those diseases of adults, may be accounted for by considering, that children are, from the weakness of their constitution, more predisposed to be acted upon by the same causes which produce them in adults, the digestive system in particular from having an incessant function to perform in passing the coarced food is more liable to frequent derangements.

The Rubral heat of Summer in conjunction with sudden Aerial vicissitudes or with exposure to a moist and vitiated atmosphere is one of the most usual exciting, and was formerly ranked among the remote causes of this complaint. After very considerable diminution of temperature the cutaneous organs from the accumulated exhalations which take place to a greater or less extent, are rendered more susceptible to the impressions of heat, whilst sudden reductions of temperature, whether arising from falls of rain, exposure of the heated body to a current of air &c. produce similar results in the affections of the organs. If we reflect for a moment on the intimate associa-



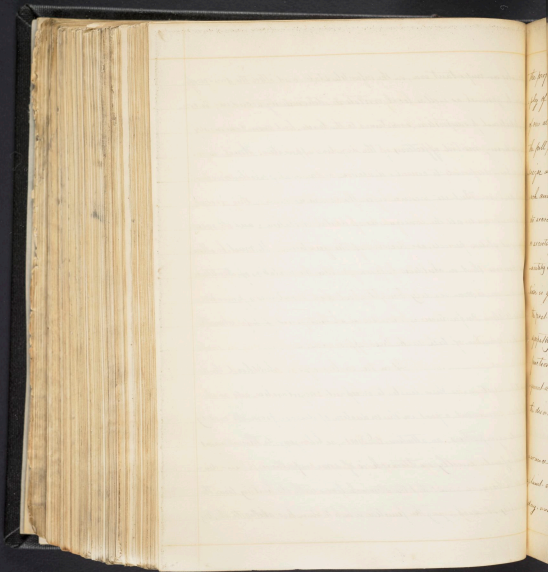
ation, which exists between the external surface and some of the most important viscera of the human structure, their action will at once appear obvious, as has been clearly demonstrated by most accurate experiment, and as Dr. Johnson says, "universally admitted," that no impression can be made on the one, without having its influence almost immediately extended to the other. Looking into even the reason of the year that Cholera Infantum prevails, being not only remarkable for the high range of atmospheric temperature, as for the certain oscillations from heat to cold, especially in the evening, another exciting cause of common occurrence worthy of our attention is to be presented, viz. improprieties in clothing, which from the fashionable notion of mothers vacillating the ease and comfort of the child, to taste and elegance, their clothes, are often made too light and so fashioned as to expose a greater part of their arms, neck, and even breast.

In looking over the exciting causes of some authors we find many enumerated such as Teething, Worms, Early weaning, &c. Though these causes are now regarded as exerting little influence in the production of Cholera, yet it would not be amiss for me to pause on the first. I mean Dentition - a process which



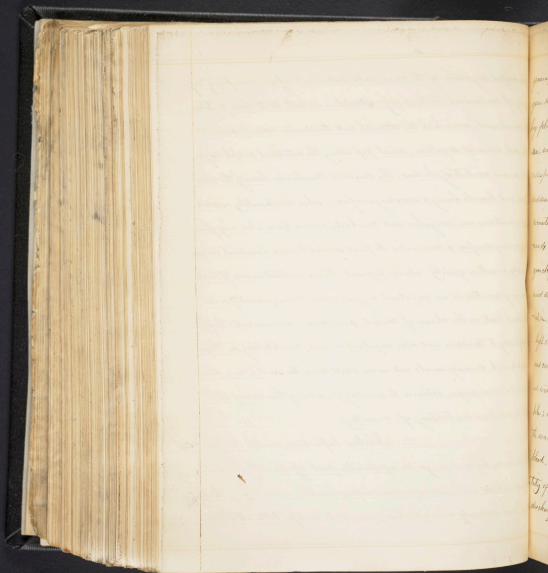
Marks an important era, in the infantile state, and often the source of much general as well as local irritation, determining according to constitutional predisposition, sometimes to the brain, but more commonly engendering morbid affections of the digestive apparatus. Hence some have been disposed to consider dentition as the most probable source of this disease. But its presence before the commencement of this process, its absence under all the consequences of dental irritation; and its occurring at stated periods, are decisive of the question. It must be allowed however that in children labouring under the irritation of dentition this disease is more readily brought about and sometimes aggravated. — Hence Cholera Infantum is more scarce at that period of life when the greater number of teeth make their appearance. —

If in the earlier ages of childhood the digestive system, is thus liable to infant irregularities, and as it acts so prominent a part in the induction of disease from its widely spread sympathies, an attention to Diet, as belonging to those causes which operate directly on stomach is of some importance, it also deserves to be borne in mind that the stomach loses with its healthy tone the capacity of discharging the functions which Nature has allotted to it, viz,

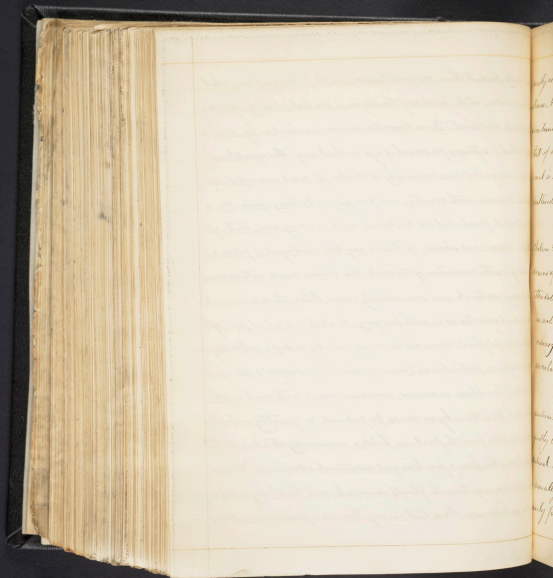


The proper digestion of the materials destined to afford necessary supply of nutriment to the body. Now it is evident that three portions of our aliment, over which the stomach and duodenum cannot exercise the full power of digestion, must pass along the intestinal canal as foreign and irritating bodies. The mucous Membrane lining the stomach and bowels being a secreting surface, when inordinably excited, its secretions are irregular and morbid, for we know, when any gland or secreting surface is overexcited the fluid secreted becomes unnatural in quantity as well as quality - always depraved. Hence a constant source of irritation is generated in an important organ, whose derangement forms the first link in the chain of morbid associations, communicates through sympathy to the Liver and other important organs, constituting in these functional derangements; and as we shall hereafter see it is in a derangement and improper action in the secreting function of the Liver that the disorder we are treating of consists -

Cholera Infantum makes its appearance in different ways, an infant when first affected with this complaint exhibits a languid appearance, sleeping more than usual during the day, and commonly cries upon being moved or taken up, little attention is



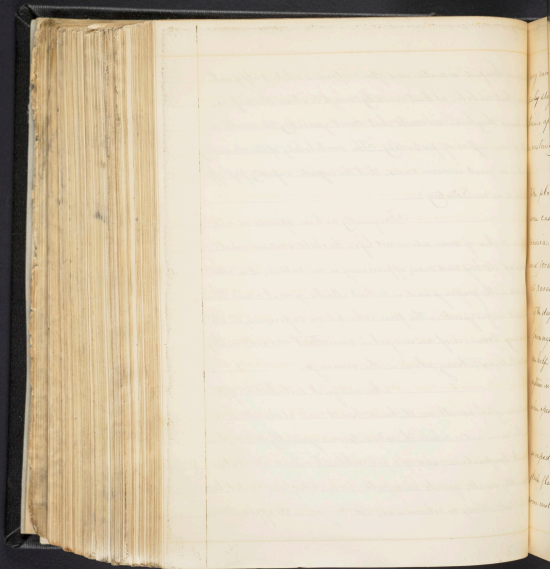
generally joined to these circumstances, and the first symptoms, which give warning of the presence of the disease is a violent vomiting attended by febrile excitement. Sometimes the disease is ushered in by a diarrhoea, which continues for several days without any other symptoms of indisposition; but more commonly it makes its onset in a rapid and sudden manner with vomiting and purging. Nothing generally is secreted at first but the maternal milk in a very acid state, afterwards mucus and clots; if there be any bile discharged it follows quickly on the evacuation of the milk, then becomes mixed with mucus, and stringy materials, and soon entirely ceases. When the disease is ushered in, as it sometimes is, with purging, the stools consist at first of a light coloured fluid, succeeded in many cases by stools of a yellowish green, and curdy, or paste coloured (formed by nurses "if all others") always mixed with a thin slime or mucus, sometimes mixed with dark or yellow bile; but the latter is by no means proportionate in quantity. In others the evacuations from the first are bilious, occasionally streaked with blood, and often have a peculiar and unnatural odour, soon the quantity of green or yellowish fluids diminish, and the stringy or mucous discharges increase. These last are very thin and copious, in some cases



as thick as hempseed is water, and often contains a white pulpy substance, but in bile, at least scarcely enough to stain the diapers; sometimes they have no smell, but most generally the smell is that of sourness or of putridity. The irritability of the alimentary canal is so great in some cases, that the regurgita rapidly pass off unaltered as in *Scintilla*.

Frequently we have symptoms as in *Cholera Morbus* of more advanced life. The child screams and draws up its legs and more or less easy in one position; it is also attended with gripings and in violent attacks, general convulsions are not uncommon; — the fever which soon supervenes, in its ordinary form, is of an irregular somewhat character, the evacuations taking place in the evening.

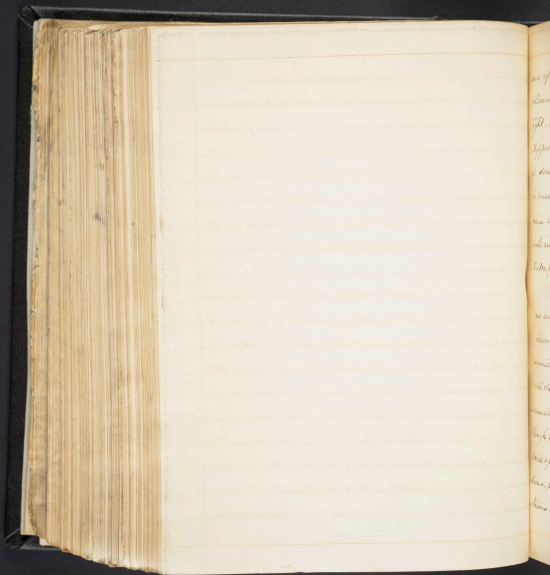
An unequal distribution of temperature often exists, on the head, breast, and abdomen, it is greatly increased; while the extremities are generally below their natural temperature, and of a pale or bluish colour. The Pulse is usually small, quick and feeble, or intermitted and corded, but rarely full strong or delirious; the tongue in its of green or is



very variable, often natural, sometimes white and firm, in the early stages dry and polished, and in those more advanced sometimes opaque, - Thirst intense, and excretion when swallowed, is instantly rejected.

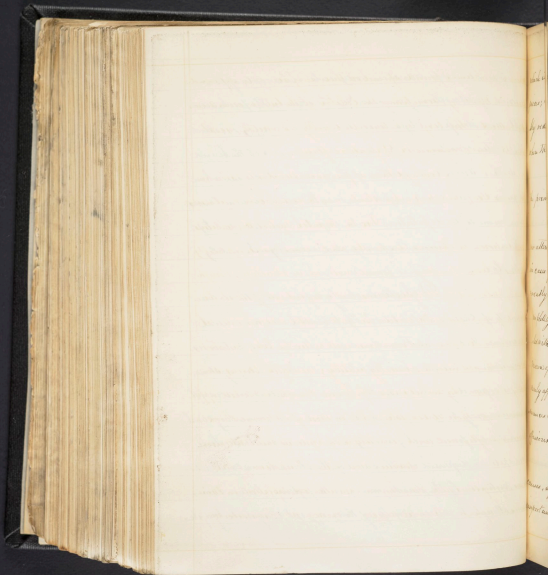
Determination to the brain sometimes takes place early and is manifested by stupor or delirium; in some cases it produces symptoms not only of delirium, but of mania, inasmuch that the child throws its head backwards and forwards, and sometimes makes attempts to scratch and bite its parents; the eyes are wild, and its countenance is expressive of the deepest anguish. As the disease advances the eyes lose their fire and lustre, and become more sunken and hollow, they are half closed during sleep, and such is the insensibility of the system in this disorder that flies have been seen to alight upon eyes when open, without exciting a motion in the eye lid to remove them;

We have few diseases where emaciation so rapidly supervenes, the child at first becomes pallid and the flesh flabby, and so completely is the flesh ultimately absorbed in some instances that the bones have been seen to come through the skin,



and upon those parts which the body quite livid spots appear, followed by ulcerations gangrenous &c. the skin on the forehead is tight, nose sharp and lips shrivelled, with a strongly marked Hippocratic countenance the almost certain mark of the hand of death. Such is the picture of this formidable disease when it runs its full course; and even under such circumstances when immediate depletion would seem to be denoted, yet life will in some instances be spared and recovery ultimately take place.

Dissections clearly inform us of the nature and seat of Cholera Infantum. The principal and most usual phenomena that present themselves to our notice in Post Mortem is inflammation, an obvious more or less extension of the digestive system, with its appendages. Occasionally, however, the effects of previous inflammation may be traced throughout the whole of the alimentary canal, though it is confined most generally to the mucous membrane, dark livid spots are dispersed over the canal of the stomach and small intestine, particularly the duodenum near the pylorus. Nature sometimes attempts to relieve herself by throwing out coagulable lymph.

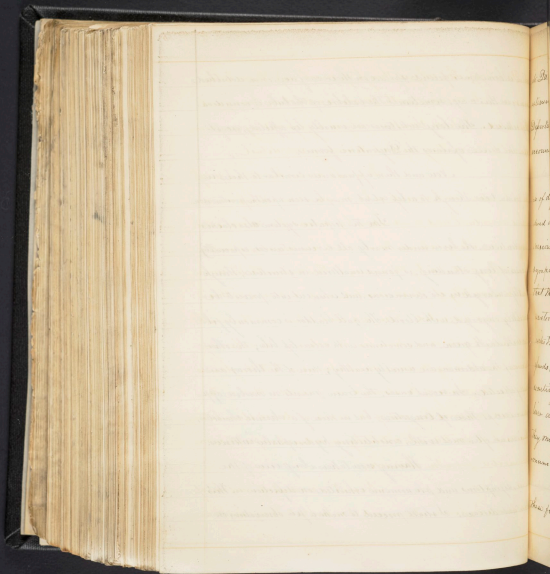


which is sometimes found spread on their surface, or in detached pieces; in this way, sometimes the calibre of the tube is considerably reduced. The large intestines are usually less affected, except when the disease assumes the Dysenteric form.

Sore and then appearances similar to those in the prima via though to a less extent, may be seen upon the peritonaeum.

In the hepatic system also claims our attention, the liver under nearly all circumstances, especially in cases of long standing, is found unaltered in structure, though greatly enlarged in its dimensions, and when cut into, proves to be completely engorged with blood. The gall bladder is commonly filled with dark green, and sometimes with colourless bile; the other viscera of the abdomen are usually healthy; those of the thorax are rarely affected. In recent cases, the brain presents no morbid appearances except those of congestion, but in those of a chronic character, affusions are often met with, constituting hydrocephalus internus.

Having now taken a brief view of the causes, symptoms and phenomena exhibited on dissection in this important disease, I shall proceed to make a few observations on



in Pathology. This subject though of much importance is too extensive to be embraced in the narrow limits of an Inaugural Dissertation. I shall therefore only in a general way give some account of its history without descending into detail.

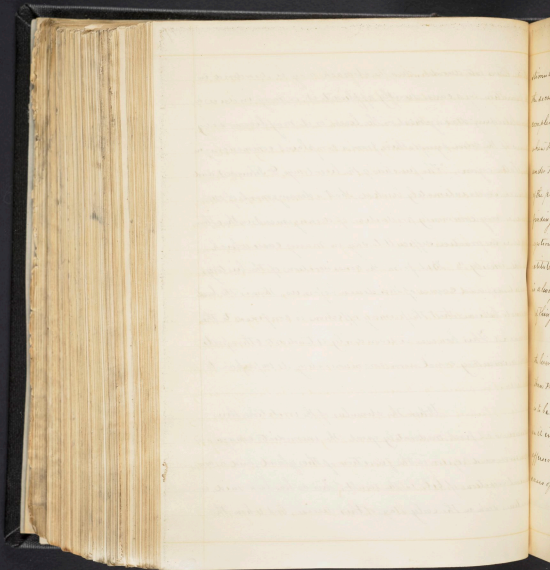
It is well known the several processes of digestion are carried on by organs whose actions are regulated accordant and co-operative by means of a nervous communication subsisting between them, which has been denominated sympathy, and it is by the agency of this sympathetic union that the quantity of fluid secreted, and the period of their secretions are adjusted. The food when taken into the mouth excites these, by its own stimulus, the action of the salivary glands, and it is by the same direct stimulus that the glands secreting the fluids of the stomach are affected. But as the liver and pancreas lie out of the reach of direct stimulation, they must be excited into action by an indirect impulse communicated from the stomach.

Now it is evident if any one of these functions become deranged it is liable to throw on or mar

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of the others into disorder, thus the stomach may be disordered in its functions by a cause directly applied to it, or may induce a corresponding derangement in the liver, or it may become a by means of the same sympathies, from a complaint commencing in this latter organ, "the functions of the liver (says Dr Johnson) and stomach are so intimately linked, that a derangement of one organ, is very commonly productive of derangement in the other, and it is in practice difficult to say in many cases which has the priority." But from the consideration of the history, symptoms, and causes of this disease before us, there is the best reason to believe that the primary affection is confined to the stomach; this however is secondarily extended to other parts of the alimentary canal, soon communicating its impurities to the liver.

When the stimulus of the irritation thus induced is at first moderately great, the immediate consequence is an increased vigour in the functions of the gland, and a consequent secretion of bile is the result. This as has been said, is sometimes seen in the early stage of this disease, but when the



stimulus is longer continued, or is from the beginning excessive, the secretory action instead of being increased, is diminished, or completely arrested. This is remarkable in the subpyloric stages when the dejections uniformly indicate a deficiency of bile, under these circumstances the "blood sent to the liver" the vent of the portal circulation to supply the pabulum of its secretions, finding no outlet becomes of course obstructed, and a dense congestion of its branches, is the necessary consequence. This constitutes the Apoplectic or congested condition of the liver which is always found in post mortem examinations, Upon the state of things here indicated it is that this disease chiefly depends.

Among the various sympathies with which the liver is intimately connected, there is none more remarkable than that in which the brain is concerned. By this sympathy it is to be explained the infarction made upon that organ, causing in it inflammation and as a necessary consequence hydroptic effusions, constituting what has often been found in protracted cases of Hydrocephalus Intermittens.

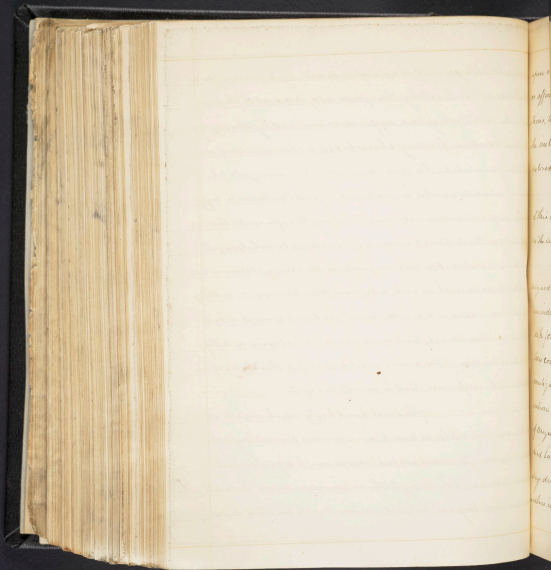
It is the most remarkable feature of

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modern Pathology and theory of medicine, that diseases are estimated not so much by their form and accidental phenomena, as by their history and supposed causes, and by their appropriation to certain leading characters of morbid conditions, under which they are eloped. The practitioner after examining all the symptoms and diagnostic signs, which present themselves in any given case of importance, after endeavouring to appreciate the condition of the different systems of sensibility, circulation, absorption, digestion &c. and considering the various circumstances, topical or general, which may vary their energy, or modify their action, reasons upon the most just and general relation of all these things, and makes a fair conclusion as to the intrinsic nature of the complaint; and it is to this abstract deduction, this inference that he directs his aims.

The same simplicity which marks all pathological principles extends to our opinions concerning remedial agency. Remedies are not now so much separated into different families, according to the various departments of the body to which they are destined, or according to the select diseases



upon which they were once supposed to act, by some direct force or affinity; but they are used indifferently to control the functions, to set up new actions, and to evocate the vital energy, by the instrumentality of which alone, vigour and well being are restored.

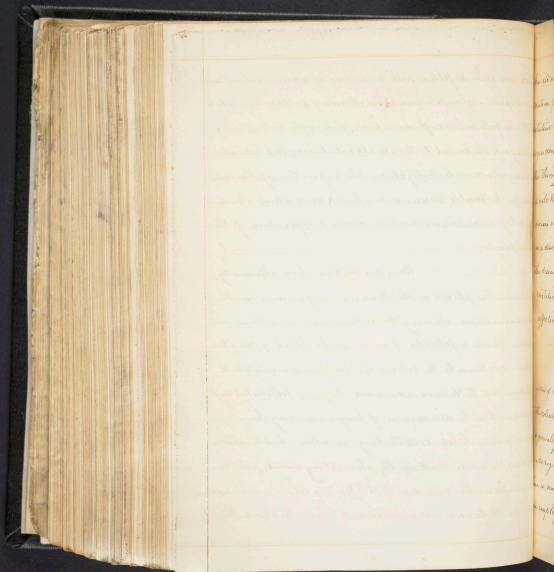
Since writing these views of the pathology of this disease, I am indebted to Dr. Hume for some useful opinions on the subject and take a pleasure in presenting them in this place.

The Doctor believing that the prevailing notions as regard the pathology of Cholera Infantum are by means settled, was induced to look to some other organ save the stomach and liver as the fountain head from whence flowed all that train of symptoms constituting the disease: whilst engaged in prosecuting his investigations I had the pleasure of witnessing an autopsic examination which he made, at The Pithad Alm's House, during the month of August last. The case was a child of about 3 months old, who died labouring under the usual symptoms of Cholera of about 10 days duration; besides the appearances which commonly present themselves in these examinations, upon opening the large intestine the

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colon was found filled with pure pus of a cream colour, and the muciperous glands which cover its inner surface in a state of extreme follicular inflammation, this inflammation extending up the canal to the small intestine; but here its violence was much mitigated. The preparations of this case is now in the Uster Museum marked A 102.10, which shows more fully since maceration the disease of pear ana of these little glands.

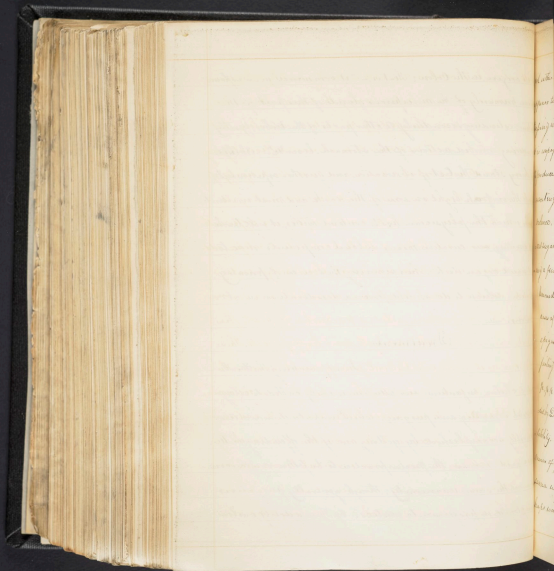
Besides the case above alluded to, the Doctor has placed in the Museum preparations from several similar cases, showing the inflammation in these muciperous glands or follicles, from the slight blush of simple erythema confined to the colon where the disease was of short duration, up to the more advanced stages of follicular inflammation where the disease was of longer standing, here in some cases confining its limits to the large intestine, but in others extending the whole tract of the alimentary canal; from these and many similar cases which the Doctor observes opportunities have been brought to view, he is inclined to believe that Crohn's Inflammation



has its origin in the Colon; that is, - "it commences in an inflammation primarily of the muciparous glands of this part of the intestine extending secondarily to other parts of the tube, finally requiring morbid actions of the stomach, liver &c." Should this Theory stand the test of observation and further experiment, it will throw fresh light on some of the dark and most inveterate diseases which the physician has to contend with, it will teach us in directing our curative means in bowel complaints more to the diseased organ itself, thus removing the source of forming irritations, which to do should prove a desideratum in all affections. —

Treatment

In approaching the Treatment of cholera infantum our attention is early called to allay the violent vomiting and purging, which important indication is generally accomplished by getting rid of the offending matter. As regard, however, the precise practice to be followed in this case, there is not the same unanimity, though generally purgatives are employed in preference to emetics. Of these a dose of castor



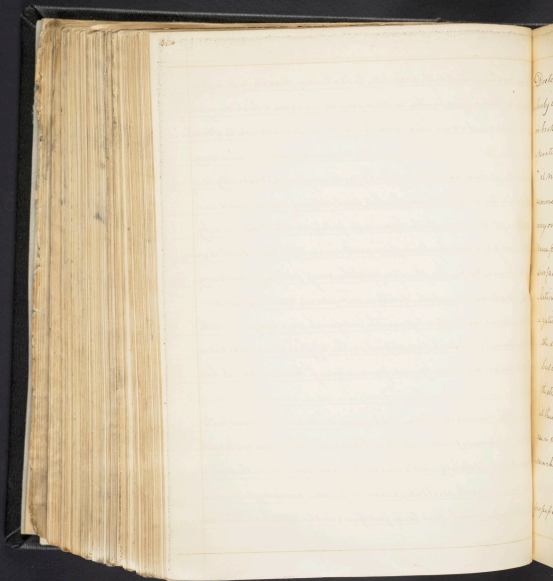
oil either alone, or in combination with a small quantity of laudanum appears to answer well in the milder forms of the disease. But in dis-
 tressing in some cases are the effects of the gastric irritability, that
 it is impossible to get such medicines to be retained sufficiently long
 to produce their desired effects; here we are under the necessity of
 resorting at once, to such means as are calculated to allay its
 violence, as lime water with milk, a strong infusion of coffee with-
 out sugar or cream, a solution of the bi-carbonate of potash, add-
 ing a few drops of laudanum or paragonie elixir, Seltzer water,
 lemonade, and opine enemata, fomentations, warm bath, and in some
 cases after other means have failed a few leeches applied to the
 epigastrium, have been attended with most happy effects. These
 failing our next resort is to Calomel given in minute doses, as the
 \frac{ss} , \frac{ss} , or even the \frac{ss} of a grain every hour, or half hour, as recom-
 mended by Dr. Ferrius. - Having succeeded in calming the gastric irri-
 tability, we next have recourse to the evacuation of the bowels by
 means of purgatives, for this purpose Castor Oil, magnesia or
 senna with some carminatives will answer well, but what per-
 haps will be found better, is calomel in larger doses either alone



or in combination with a small proportion of opium, as it will operate more effectually in allaying any spasm which may happen to exist, and also more liable to be retained on the stomach.

In the commencement of this complaint, if there be much febrile excitement and especially if the child be of a plethoric habit, venesection is demanded, in relieving congestion of the liver and portal circulation, and by obviating a tendency to inflammation in other important organs, as the brain &c. &c. we thus prepare the way for the more speedy and effectual operation of other remedies. Nevertheless the lancet must be "operated with judgment, and tempered with discretion"; topical venesection or the application of leeches over the stomach has been found productive of the most signal benefit.

The practice above laid down will not be found altogether uniform, for says Professor Chapman "When the abdomen is the seat of gastric irritability and vomiting, great pain about the umbilicus, and a quick irritable pulse, it becomes necessary to prescribe an emetic;" which has been further corroborated by a late writer.



Doctor Cartwright of Natchez, who speaks of emetics as particularly useful when taken with the above symptoms, there is an ataxic or broken reaction, indicated by an unequal distribution of temperature &c. By exhibiting an Emetic in this stage, he says, "it not only cleanses the stomach, produces a secretion of bile, removes the plethora of the Portal system, and the congestion of any one or more of these viscera, from which the abdominal venaporta arises, but likewise determines the fluids to the surface, produces a soft state of the skin, equalizes the circulation, and prevents the subsequent formation of visceral congestions." This practice of using emetics may be useful even in the subsequent stages, by the influence they exert on the liver, but it is chiefly so in the commencement, when by cleansing the stomach of its morbid secretions, which are always present, it thereby removes a source of much irritation, however their use is contra indicated, when there is much phlogosis of the stomach, or in cases of extreme emaciation.

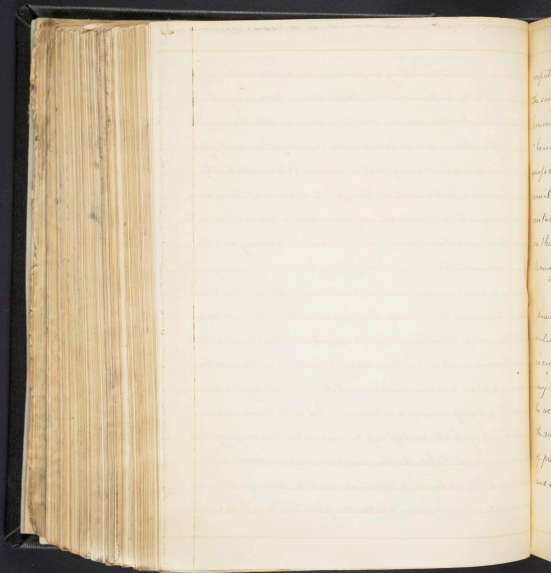
But it is in Cholera we chiefly consider as properly proper lies that eminently adapted it to this disease. "Mor-



-cury penetrates to the inmost recesses of this diseased and disor-
 -dering it of all malignity, effectuates a cure at once radical, du-
 -rable and complete? Such was the language of the late pro-
 -fessor Miller, and it is evident from the Pathology of this com-
 -plaint, that while the irritation and derangement of the hepatic
 apparatus still continues, all our endeavours must be consid-
 -ered as palliative; why should we strike at the branches while
 the root remains untouched?—We, therefore, early begin us
 to correct the disordered action of the liver and remove the
 congested state of that organ. Valomed by its specific action
 on the Hepatic system, is said to possess the power of increasing the
 biliary secretion when deficient, and of lessening it when increased.
 Now to obtain the just of these properties is just what in this case
 is desirable, for it is plain, if we can renew the secretory func-
 tion of the gland, we restore its healthy action, and thus by not
 only relieve it of the congestion, but alter the diseased impression
 of the external surface depending upon its derangement; The
 effects of Mercury are not to be estimated solely from its purgative
 quality, but by its specific action on the hepatic system, and



its power of affecting sensitive surfaces endowed with irritability, and in a state of inflammation. Bile too in doses so regulated as to obtain its specific actions, and to produce an attenuated effect only, either alone, or combined with ipecacuanha, and opium this medicine will rarely fail to procure bilious stools, the precursors of a better state of things: to calm irritations, and to determine to the surface. As soon then as two or three bilious stools have taken place, we find the heat abating and the action inclined to be moral. These symptoms manifesting a tendency to a restoration of a due balance of actions, should never be lost sight of, for if the purgation be followed up by others, or if it be permitted to operate excessively, it will undo the easy work it has been doing, viz, destroy the equilibrium which it has been instrumental in producing; so soon then as these symptoms of a return of a loss of balance occur, as an abatement of heat, restlessness, and on the discharge of bilious matter from the bowels. The purgative action should be suspended, or at least moderated, and the deranged secretions set into action by some gentle diaphoretic. Until this



important Crisis takes place, all our endeavours to arouse anew the energies of the cutaneous vessels will prove abortive; great relief however may be obtained by the frequent use of the tepid bath, bearing in mind the intimate sympathy between the external surface of the body, and the internal surface of the alimentary canal, it will also be found an important remedy to soothe irritability; and when we wish to make a powerful impression on the surface it should be impregnated with common salt, brandy, mustard &c.

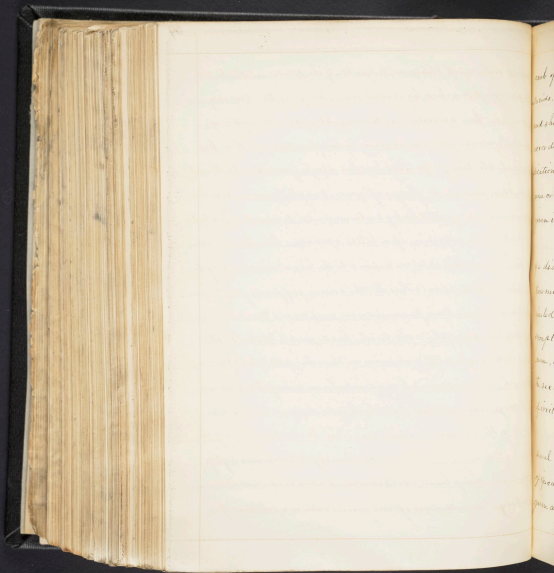
During the continuance of this disease, there will be as a necessary consequence repeated accumulations of morbid matter in the intestines; as these would but increase and aggravate the violence of the complaint, it is necessary that they should from time to time be evacuated, this may be accomplished by the exhibition of Castor Oil, Rhubarb, and the mild aperients, not too often repeated, as the frequent use of purgatives are apt to increase the already existing irritation, and should therefore be carefully avoided.

Cholera Infantum is some times accom-

The first of these is the fact that the
 world is not a uniform whole, but is
 composed of many different parts, each
 of which has its own peculiar character
 and its own laws. This is the case with
 the human mind, which is not a single
 entity, but is composed of many different
 faculties, each of which has its own
 peculiar powers and its own laws. The
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-panied with much phlogosis, presenting itself under the mask
 of dysentery, marked by much fever, hard pulse, griping and
 tenesmus; here we must not lose sight of the character of
 the inflammation. Venesection is demanded assisted by
 topical bleeding, for this, leeches are preferable which in
 some cases supersede the use of general depletion, with the
 occasional use of cold barley water enemata; in some instances,
 to this last the addition of a little opium. It is in this form
 of the disease that deterrinations to the head are most apt
 to take place, should this be the case, supposing sanguine
 depletion to have been procured, we next resort to revulsive
 applications; apply cold to the head and all over to the
 nape of the neck, with sinapisms on the soles of the feet, the
 stomach prepared much good will be derived from a mucous
 purge, the repetition of which will depend on the char-
 -acter of the alvine evacuations.

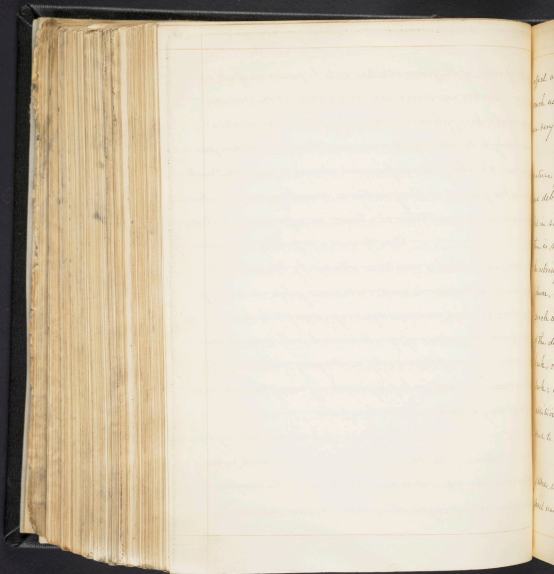
Acidity is a common symp-
 tom in this complaint, so alkaline and absorbent medicines are
 necessary. Minute doses of Magnesia usta, or a solution of a



carb of either of the fixed alkalies, will be found useful antacid. Blisters are serviceable at any stage of the disease and should be applied over the Epigastrium or Epistomies, according to the state of the case, and the most striking indications. To allay the excessive and almost insupportable thirst more or less present in every instance, mucilaginous drinks, given in small quantities at a time, and frequent repeated.

When the disease passes into the nature of a diarrhoea, which is sometimes attended by tormina and tenesmus, the stitaceous and cretaceous juleps are necessary, spiced by sweet oil, and anodyne injections for the latter symptoms. Injections of gruel and oil with some laudanum, are very useful not only in allaying irritability of the rectum and colon, but by washing away the remains of irritating secretions, from the ports.

The sugar of lead as a remedy in several affections of the bowels, combined with a small portion of ipocacuanha when it is desirable to act on the surface, given alone or in conjunction with opium, is said to



effect a removal of pain, severe, tormina &c. and has been much used in this complaint, particularly when the bowels are very irritable, attended with frequent bloody stools.

Cholera sometimes passes into the nature of a colliquative diarrhoea, arising from mesenteric and debility; in this case Astringents are generally employed but in resorting to this class of Medicines, first, satisfy ourselves there is no inflammation or hepatic congestions existing, the astringents of common use are, recta. prep. and tinct. heric. alum. catechu, galls, logwood, copperas, geranium maculatum, sacch. saturni, &c. &c. But what is preferable is an infusion of the dew or blackberry root, decoction of the pomegranate bark, or as used by Dr. Physick, an infusion of the dogwood bark; with most of these, laudanum will be found a valuable addition, turbinthinate prep. and common resin are said to be very effectual in restraining the mucous discharges.

As an adjuvant a flannel shirt well fitted, with due attention to cleanliness, or perhaps better, as first used by Dr. Chepman, a flannel bandage around the



abdomen, which will prove not only a defence from cold and humidity, but will curb the action of the abdominal muscles, and tend to keep the intestines quiet. This brings us to the consideration of the regimen. It is recommended to continue the child to its mother's milk, and if weaned to procure a wet nurse, as nothing is better than humane milk, which of itself has been known to put a stop to the ravages of this disease, if the child will not take the breast. The diet should consist in the early stage of rice or barley water and milk; but the disease a little further advanced we may allow a more nutritious diet, as, arrow root, sago, tapioca, rice or boiled flour, with a proper proportion of new milk. Care should be taken that the stomach be not overloaded by the quantity of food taken; as a general rule, meats of all kind are inadmissible except in extreme debility of the stomach and bowels when a little, ham or salt fish may be allowed in order to create a desire for food.

Whatever may be our exertions, and notwithstanding all our boasted remedies in this disease, I regret to add that often all are administered without putting an end



to its ravages, so long as the child continues exposed to the operation of the causes which were instrumental in its production. Attention therefore should early be paid to a removal to the country as the only sovereign remedy. When the convenience of a country residence cannot be obtained, evident advantage has been derived from frequent changes of air, as taking the child out of the city one or two days, by frequently crossing a river in an open boat or riding out in an open carriage. Dr Chapman condemns this practice during the height of the disease, and thinks a removal to the country at this particular time would be of no benefit, but highly recommends it during convalescence.

Considering it as the office of the physician, not only to derive remedies for the ever varying forms of diseases already established, but also to trace back to their source the springs of evil, and prevent their further flow; with these views I shall mention by way of conclusion the measures which common experience has found the best. In phylaxis to this complaint,

- 1st. Never permit the child to be weaned within the year, as no food

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is so salutary as the natural milk.

2^d Let the cold bath be daily employed, used in the morning, but with care, not to use it immediately upon the child's rising from bed when in a perspiration, care also that there be no effluvia come on the skin.

3^d Attention to the dress of children, direct the wearing of flannel next to the skin and worsted stockings.

4th Attention to diet, The proper food for an infant within the year, is its mother's milk, but if weaned should be fed on milk and on farinaceous substances boiled, after a few months, provided it has teeth, a small portion of well-digested animal food should occasionally be allowed.

5th During dentition, the teeth should be frequently examined if swollen or inflamed lance the gums.

6th Attention to cleanliness.

7th Let the child above all be removed to the country on the approach of warm weather.

(Finis)

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